

456-WP-001-001

Plan for Physical Configuration Audits of Pre-Release B Testbed for the ECS Project

*White paper - Not intended for formal review
or Government approval.*

White Paper

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SUBMITTED BY

<u>Giuseppe Calavaro /s/</u>	<u>4/11/97</u>
Giuseppe Calavaro, System Management Office	Date
EOSDIS Core System Project	

<u>Paul Fingerman /s/</u>	<u>4/11/97</u>
Paul Fingerman, System Management Office	Date
EOSDIS Core System Project	

Hughes Information Technology Systems
Upper Marlboro, Maryland

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Abstract

This document sets forth the plan for conducting Physical Configuration Audits of the Pre-Release B Testbed for SSI&T of AM-1 and SAGE III instrument science software.

The audits will confirm that the as delivered hardware is compliant with the Implementation Plan for Pre-Release B Testbed for the ECS Project, 416-WP-001-001 and CCRs approved by the Pre-Release B CCB that update the hardware configuration.

Upon completion of each audit the Testbed will be turned over to resident M&O personnel for sustaining engineering.

Four DAACs will be audited: GSFC, LaRC, EDC and NSIDC. Primary source of inventory data will be COTS hardware information obtained from the VCATS database.

Keywords: Testbed, Pre-Release B, audit, PCA, DAAC, VCATS

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Appendix A. Sample Inventory Listing

Abbreviations and Acronyms

1. Introduction

1.1 Purpose

The Pre-Release B Testbed will be deployed to four designated DAACs: GSFC, LaRC, EDC, and NSIDC. Deployment will commence on May 1, 1997.

This plan defines the process by which Testbed hardware will be inventoried and turned over to ECS M&O for operations and maintenance. In general turnovers will occur approximately two weeks after Testbed delivery to each site.

1.2 Scope

This document sets forth the plan for conducting Physical Configuration Audits (PCA) of the Pre-Release B Testbed for SSI&T of AM-1 and SAGE III instrument science software. Four DAACs will be audited: GSFC, LaRC, EDC and NSIDC.

Primary source of inventory data will be COTS hardware information obtained from the VCATS database. Audits will take place at each site after the “sell off” demonstration and fielding of the Testbed at that site.

Since the Testbed is not a formal release, PCAs are not a contractual requirement. However, these audits will be conducted by ECS to confirm that the “as delivered” hardware is compliant with the Implementation Plan for Pre-Release B Testbed for the ECS Project, 416-WP-001-001 and approved CCRs made by the Pre-Release B CCB.

PCAs will consist of physical inventories of COTS hardware, as described in COTS hardware listings obtained from the VCATS database (see Appendix for example listing). Inventory will be facilitated by use of installed network diagrams, cable management plans, and floorplans prepared for each site.

COTS software and custom software will not be a part of this inventory.

Functionality of the Testbed will be as described in 416-WP-001-001, Implementation Plan for Pre-Release B Testbed for the ECS Project, Sections 2 and 3.

Upon completion of each audit the Testbed will be turned over to resident M&O personnel for sustaining engineering.

1.3 Criteria

The following have been established:

- M&O will be “customer” for turnover.
- Government will be invited to observe.

- Audits will follow engineering demonstration of Testbed functionality to site personnel and will be conducted on “non-interference basis” with demonstration.
- Use of development personnel prior to and during inventory will be minimized.
- Inventory will be conducted by project Configuration Management status accounting personnel assisted by M&O.
- PCAs will be considered complete at each site when the COTS hardware baseline described in the Pre-Release B Testbed Plan for the ECS Project conforms to the COTS hardware listings obtained from the VCATS database.

2. Related Documentation

2.1 Parent Document

423-41-01	Goddard Space Flight Center, ECS Core System Statement of Work
505-01-41-135	ESDIS Project CCR

2.2 Applicable Documents

416-WP-001-001	Implementation Plan for Pre-Release B Testbed for the ECS Project
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2.3 Information Documents

MIL STD 973	Military Standard: Configuration Management, 17 April 1992
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3. Audit Process

3.1 Concept

M&O will generate listings of COTS hardware from VCATS in accordance with the Testbed configuration that has been identified for turnover by the Pre-Release B Testbed CCB. In addition site-specific installed network diagrams, cable management plans, and floorplans will be developed for use.

Project CM status accountants will review this data to assure conformity to Pre-Release B Testbed CCB configuration for each site. If differences are found, corrections will be made to the VCATS database or to the diagrams / plans to bring them into conformity with the information baselined by the CCB.

After all information has been reconciled project CM, working in close coordination with Testbed and M&O, will conduct preliminary PCAs of Testbeds at each deployed site.

Upon completion of Testbed demonstrations project CM will conduct PCAs for M&O to facilitate turnover of the Testbed at each site. Any nonconformance to the physical configuration will be recorded as NCR and provided to M&O.

3.2 Physical Configuration Audit Procedures

3.3.1 Compliance

Audits will confirm that the as delivered COTS hardware at each site is properly reflected in VCATS documentation, to include manufacturer, model, serial number, host name, part number, bar code number, RAM, internal and external disk capacity, network interface cards, number of CPUs, number of power supplies, and controller cards. In addition the audit will confirm the configuration of all peripheral hardware specified in documentation, to include RAID configurations, printers, tape drives, terminals, and workstations.

3.3.2 Completeness of Configuration

Audits will correlate equipment location and position name with information shown on the floor-plan and VCATS documentation to assure completeness of configuration at each site.

3.3.3 Correctness of Site Setup

Audits will also confirm that each site is configured in accordance with appropriate network diagram and cable management plan.

3.3 Schematic

The process is shown schematically on the following page:

Shown Schematically

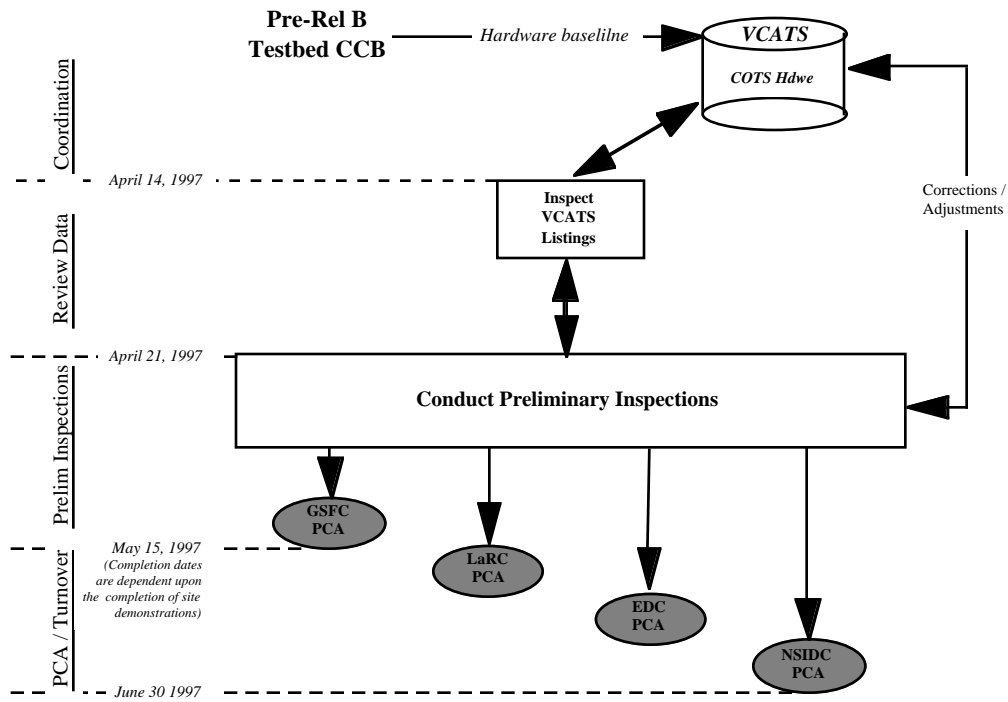


Figure 3-1. Schematic of Pre-Release B Physical Configuration Audits

4. Implementation Approach

4.1 Phasing

Activities will be conducted in phases, as follows:

- Coordination (*thru April 14, 1997*). All coordination necessary to develop listings and to prepare floorplans, network diagrams, and cable management plans will take place. During this period project CM status accounting personnel to conduct the audits will be designated.
- Review of inventory data (*April 14-21, 1997*). Designated project CM status accounting personnel will review initial VCATS listings, floorplans, network diagrams, and cable management plans for completeness.
- Preliminary Inspections (*April 21 - May 15, 1997*)* Listings, plans, and diagrams will be reviewed at the site where the hardware is located in coordination with Testbed personnel. Upon completion a “dry-run” of the PCA and turnover process will be conducted.
- On-site PCA and Turnover (*May 15 - June 30, 1997*)*. These will be conducted on site and will culminate in turnover of the Testbed to M&O for sustaining engineering.

4.2 Schedule

The schedule for PCA and Turnover is shown on the schedule which reflects planned “not later than” dates for each site. This schedule may be on the next page:

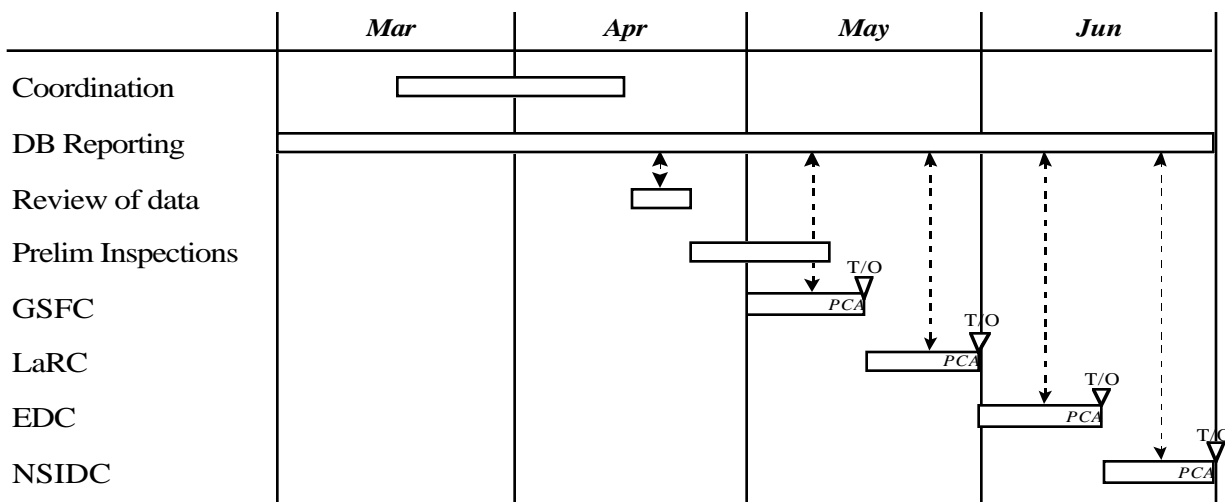


Figure 4-1. Schedule for Pre-Release B Physical Configuration Audits

* Audits will be conducted on non-interference dates with testbed demonstrations. Dates shown are contingent upon completion of site demonstrations.

** Specific dates will be coordinated by M&O.

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5. Responsibilities

5.1 ECS Offices:

5.1.1 Pre-Release B Testbed

- a) Appoint principal point of contact for audits.
- b) Uniquely identify all COTS hardware for each site.
- c) Maintain cognizance of project CM and M&O activities.
- d) Support activities to the extent required.
- e) Participate in audits and resulting turnover process.

5.1.2 M&O

- a) Appoint principal point(s) of contact to work with project CM status accounting for VCATS and drawings/plans and for site visits
- b) Generate VCATS listings, installed network diagrams, cable management plans, and floorplans for each site.
- c) Manage corrections to VCATS, as identified by project CM status accounting.
- d) Further manage development of accurate installed network diagrams, cable management plans, and floorplans.
- e) Participate in audits and resulting turnover process.

5.1.3 SMO (CM)

- a) Appoint team leader from project CM status accounting.
- b) Work with M&O on completeness of VCATS listings, installed network diagrams, cable management plans, and floorplans for each site.
- c) Oversee corrections to VCATS, as well as to installed network diagrams, cable management plans, and floorplans, in coordination with M&O.
- d) Manage audits and resulting turnover process.
- e) Prepare final report of Pre-Release B Testbed Audits.

5.1.4 QO

Monitor process throughout

5.2 Coordinating Instructions

Activity will be led by project CM, which will form the audit team and coordinate all administrative procedures.

Appendix A. Sample Inventory Listings

••H•0 CXRUN DATE: 03/27/97
NO: 1

PAGE

EOSDIS
PCA AUDIT REPORT
BY EIN NUMBER

PARENT EIN: 00001917

PLATFORM NAME:

LOCATION: GSFC, Greenbelt, MD
BUILDING #: 32
ROOM #: C210H

USER CONTACT: Robert M. Swanhart
USER'S PHONE: (301) 614-5232

EIN	MFR	PART NUMBER	MODEL/VERSION	SERIAL NUMBER	PRODUCT DESCRIPTION	OK
Child of Parent ECN: 00001917						
00001920	DEC	PB74SFA	1000	NI640009MZ	AlphaServer 1000	_____
00001920	DEC	PBXRW-NA		1G63184765	4.3 GB 7200 RPM WIDE SCSI DISK	_____
00001920	DEC	PBXRW-NA		1G63189385	4.3 GB 7200 RPM WIDE SCSI DISK	_____
00001920	DEC	PBXRD-CA		8L62303575	CD ROM - Internal	_____
00001920	DEC	PBXKP-BA			SCSI ADAPTER	_____
00001920	DEC	DEFFA-DA		TA61300174	FDDI - Adapter - Dual Attached FDDI	_____
00001920	DEC	DEFFA-DA		TA61300177	FDDI - Adapter - Dual Attached FDDI	_____
00001920	DEC	PBXTL-CA		6M62410203	TLZ07 4MM DIGITAL AUDIO TAPE	_____
00001920	DEC	PB7MA-AE			256 KB RAM	_____

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Abbreviations and Acronyms

CCB	Configuration Change Board
CCR	Configuration Change Request
COTS	Commercial Off-the-Shelf
DAAC	Distributed Active Archived Center
ECS	EOSDIS Core System
EDC	EROS Data Center (DAAC)
EOSDIS	Earth Observing System Data and Information System
ESDIS	Earth Science Data and Information System
GSFC	Goddard Space Flight Center (DAAC)
I&T	Integration and Test
LaRC	Langley Research Center (DAAC)
M&O	Maintenance and Operations
NCR	Nonconformance Report
NSIDC	National Snow and Ice Data Center (DAAC)
PCA	Physical Configuration Audit
QA	Quality Assurance
SSI&T	Science Software Integration and Test
VCATS	Vendor Costs and Tracking System